LED Wi-Fi Controller

(USR-WL1)

File version: Ver 1.1.3

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1. Hardware Connection

Please refer to the below picture, connect DC12V /24Vpower supply and LED lamp belt to WL1.

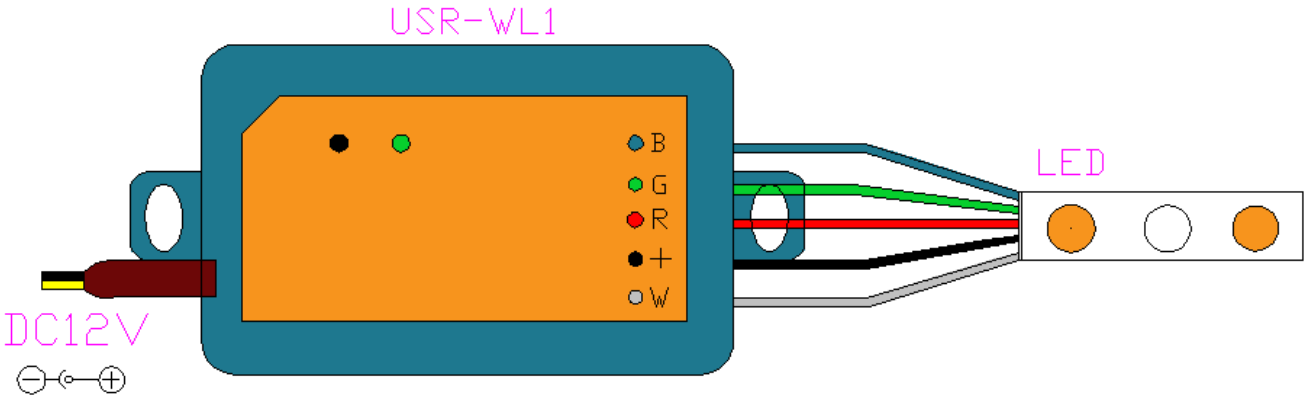

Figure 1 **Wiring diagram**

Schematic wiring

Note: this product supports two kinds of power supply wiring way: standard DC power plug (5.5*2.1) and 5.08 * 2 terminals.

2. App Download

- IPhone support IOS 7.0 version and above
- Android support android 2.3 version and above

Please click the below link or scan QR code to download the Application.

http://www.zhangkongbao.com/usrledDownload.html

Figure 2 **QR code of App**

3.Point-to-Point Control

This chapter takes example of Android to introduce how mobile controls LED in detail.

3.1 Wifi Connection

1. Do Hardware Connection according to chapter 1, then power on.

2. Open the phone “Settings”—>”WLAN”(“Wifi” for some phones),find “USR-WL1_xxxx” (xxxx for random letters or numbers),Click “Connect”
As shown below:

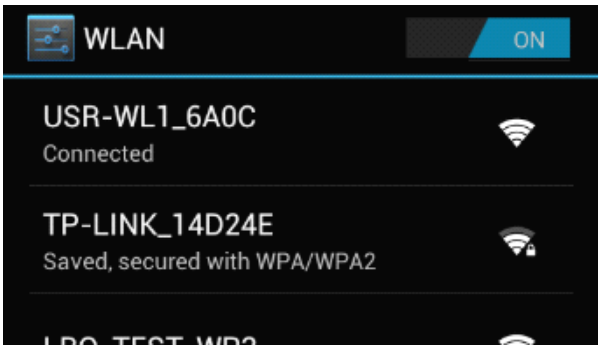

Figure 3 **WIFI connection**

After this, phone’s wifi is added into the WL1 wireless network (Light of WL1 kepps light if connection is normal).

3.2 App Operation

Open the software after installation.

The software will automatically search WL1 devices within a LAN. Devices searched will be displayed in the list if the previous steps are right.
As below:

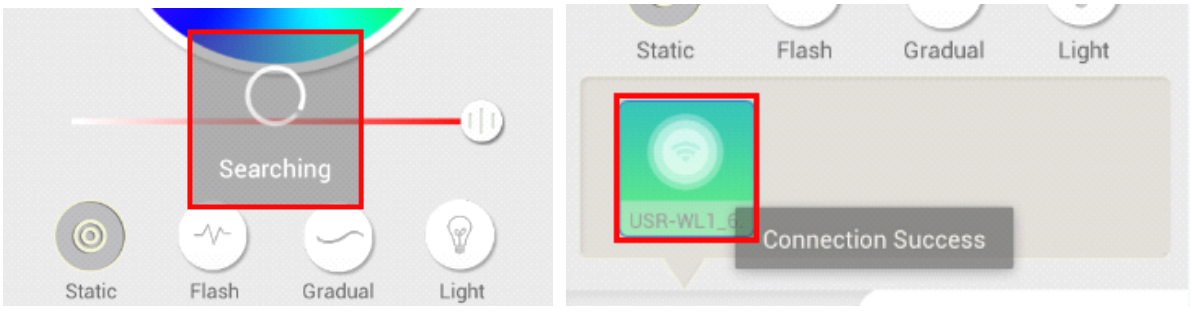

Figure 4 **App Search Page**

WL1 works under “Static” mode by default, which you can change the color plate to change the color of the LED. Of course, you can also select the “Flash” and “Gradual” model to control the LED color switching.

Change to “Flash” or “Gradual” mode, pls refer to the below picture. Click one of the four color parkers, and select color from the plate, then click “Ok”, LEDs will change constantly.

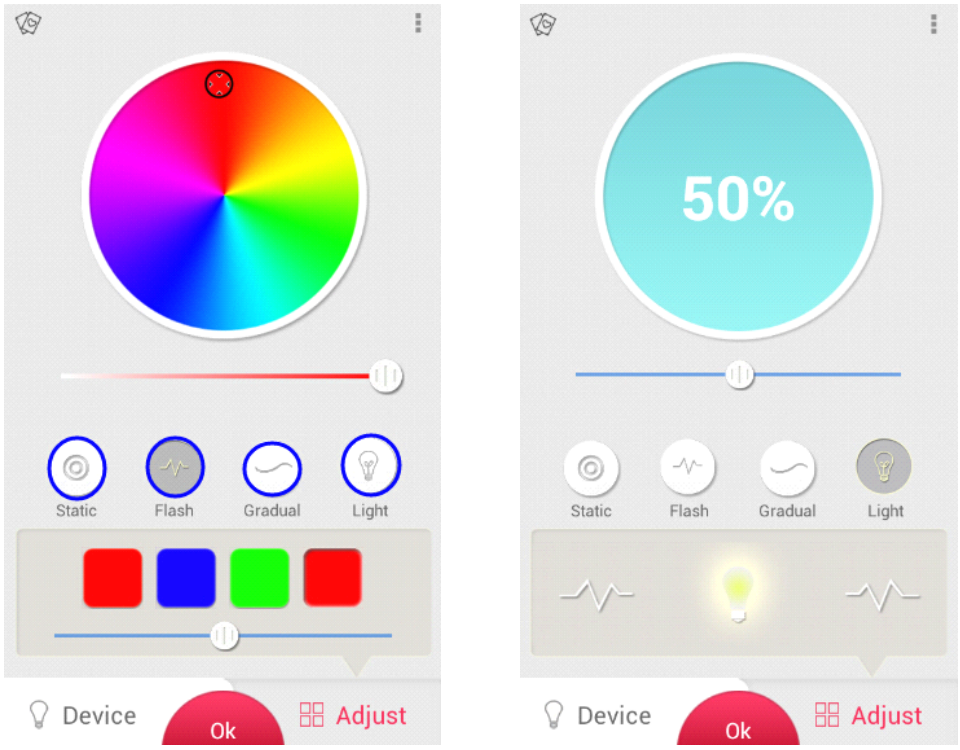

Figure 5 **App Control**

4. Join The Router

WL1 provides two ways to access wireless router: Smart- link and Configuration Page.

4.1 Smart-Link

Firstly, the phone connect to the router WL1 will join.When wl1 is in an energized state, short press its button for 1 to 5 seconds. The Light blink fastly. Then release your hand, the light becomes off then blink again. Now, WL1 enters into Smart-Link configuration mode.

Open software “USR Led”, and click “More” in the upper right corner, select “Smart - link”, then enter the Smart-Link configuration page. The below reveals the meaning of each icon.

Figure 6 **App icon and meaning**

Typing the password then click “Connect”. Wait for 10-20 seconds, “device MAC ACCF23296A0C: configure success” will be shown.

If WL1 join the router successfully, the light will change to “on” state from blinking.

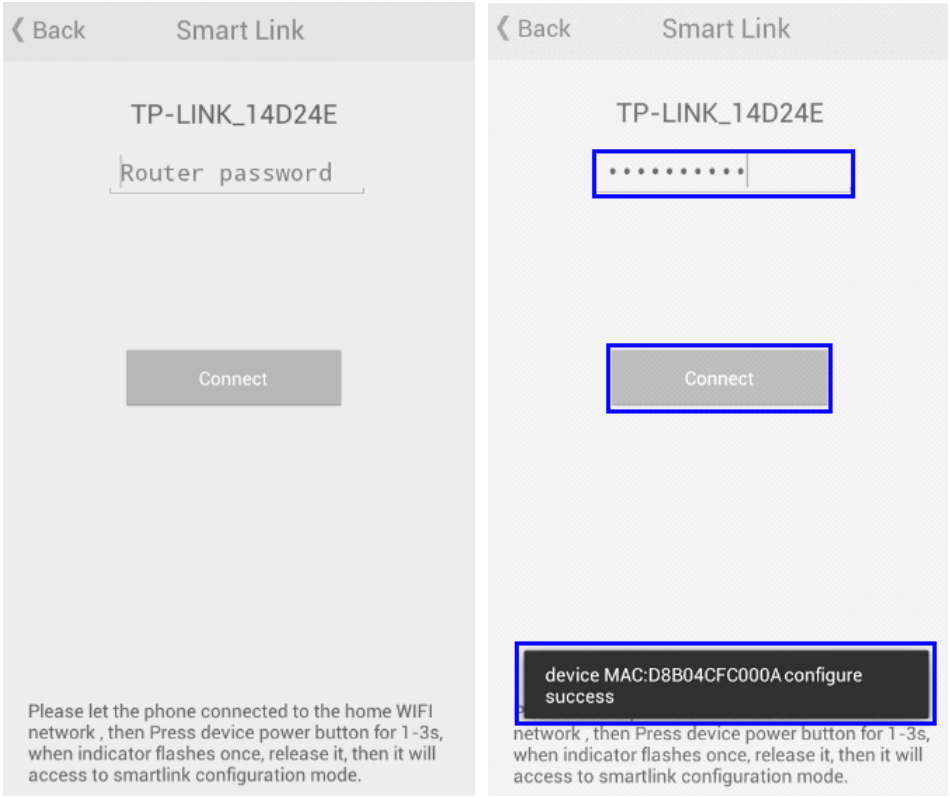
Back
Smart Link
TP-LINK_14D24E
Router password
Connect
Please let the phone connected to the home WIFI network , then Press device power button for 1-3s, when indicator flashes once, release it, then it will access to smartlink configuration mode.
Back
Smart Link
TP-LINK_14D24E
Connect
device MAC:D8B04CFC000A configure success
network , then Press device power button for 1-3s, when indicator flashes once, release it, then it will access to smartlink configuration mode.

Figure 7 **Smart-Link Configuration Page**

4.2 Usr-Link

First the phone WIFI connected to the wireless network, the WL1 specific process can refer to section 3.1.The next open apps, and click enter the page of Smart - Link, you will find that the page has changed.
You only need to write the router's name and password to the specified location, if you don't know the name of the router can also click on the search button and search around the router.Finally click "OK" to go.Specific operation page is as follows:

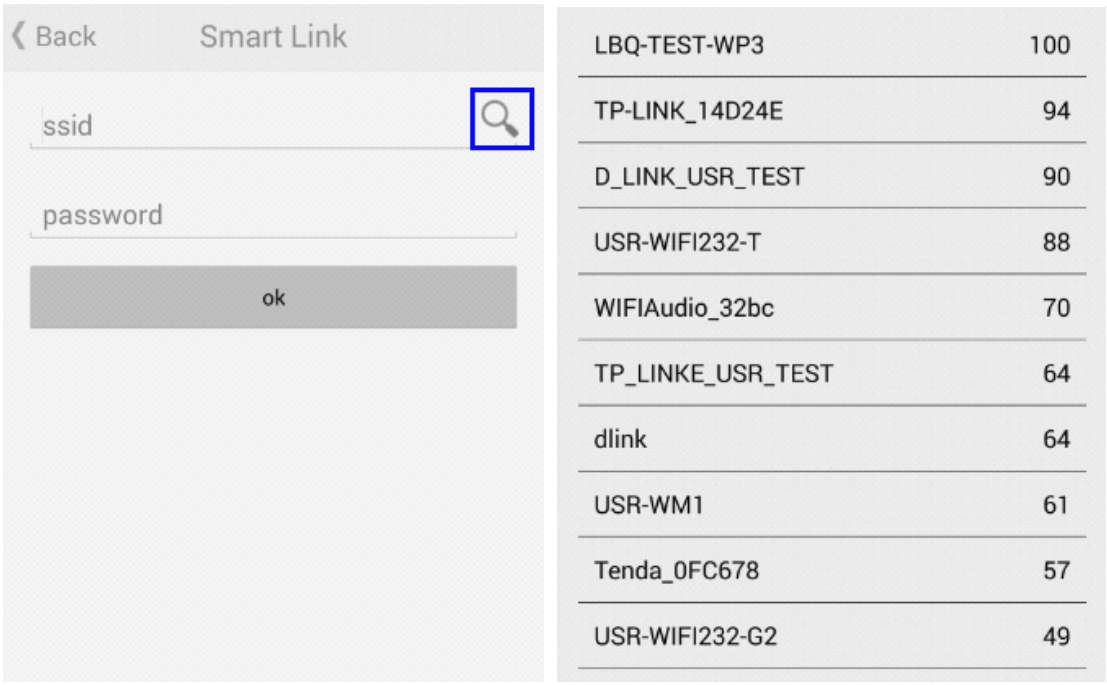

Figure 8 **Usr-Link**

Figure 9 **Usr - Link success**

4.3 Configuration Page

Refer to step 2 in chapter 3.1 Wifi Connection to add phone's wifi into the WL1 wireless network (or a computer), and then enter WL1 built-in web "10.10.100.254" through phone's explorer. After landing the browser will be prompted to enter your user name and password, the default username is "admin", the password is "admin".User name password can be modified.The specific operation is as following:

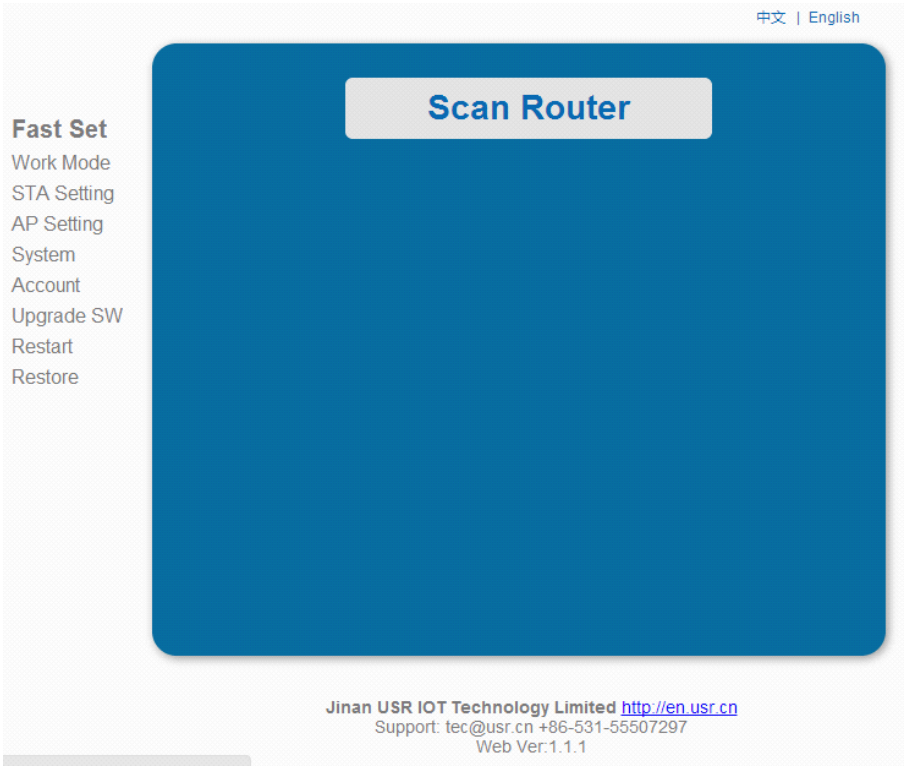

Figure 10 **Fast Set Page**

Click “Scan Router”, select the name of the router in the drop-down list, and click “OK”.

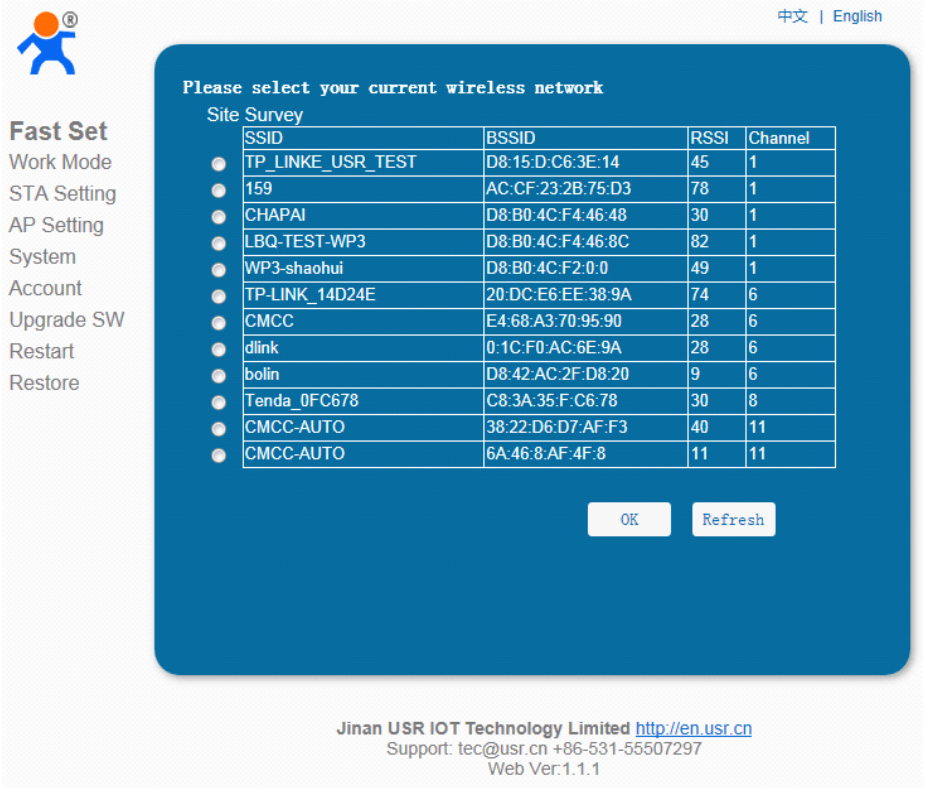

Figure 11 **The Router List**

Enter the router’s password, and click “Save”

Choose “Reset” on the jump page.

So, WL1 is connected to the router.

5. Multiple Light Control

Our App can control multiple WL1 at the same time, so when you have multiple WL1 in the same local area network (LAN), you only need to open the App ,then you can be controlled at the same time.

Firstly, connect multiple WL1 to the same router. Refer to Chapter 4 Join The Router.
Add phone to the LAN, open App, after searched, the devices list will come as below:

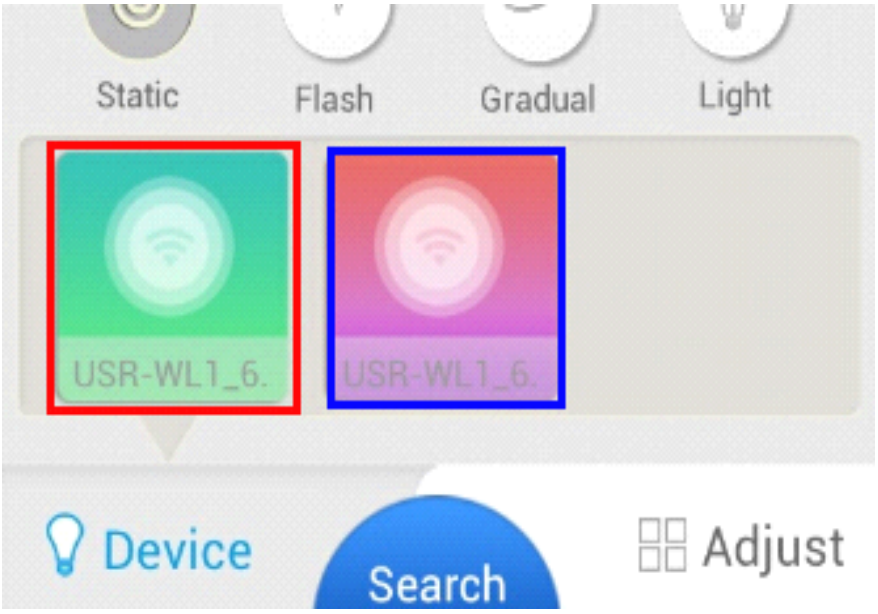

Figure 12 **Control Multiple Leds**

Next, you can click one device in the list to operate. And click the corresponding device iron if you want to control another one.

6. Preset Scene

For the convenience of users, we have done many preset scene. Check these scenes, you can click “Scene” icon in the upper left corner of software homepage. As below:

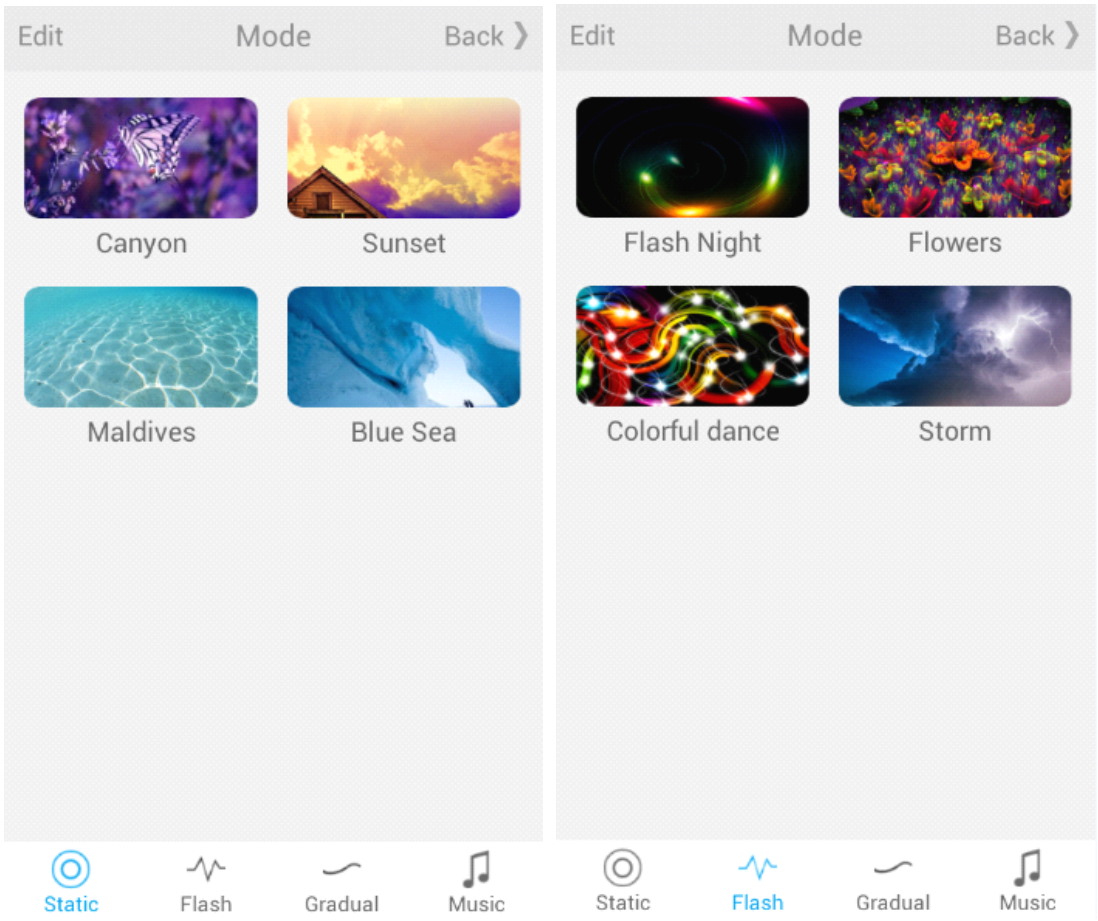

Figure 13 **Preset Scene**

Preset scene is set as “Static”, “Flash”, and “Gradual”. Under the preset scene, only need to touch mode icon, the LED will become that scene.

Of course, you can set your own favorite scenes. Pls refer to next chapter.

7. Customized Scene

Open App, click menu bar in top right corner.In the popup menu, select the “Save” then dialog Appear to save the current configuration of the LED flashing scene. Type scene name or click the blue area to take photos, finally click “OK”. As below:

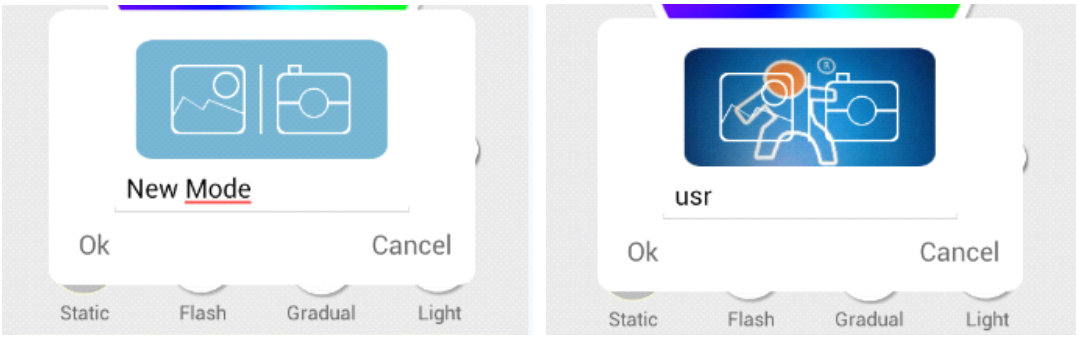

Figure 14 **Save Scene**

Then click “Scene” icon, and enter the scene management page, you can see the scene saved just now. It can also be used to save “Flash”, “Gradual” scene. If the user wants to delete his defined scene, click “Edit” to delete the corresponding item.

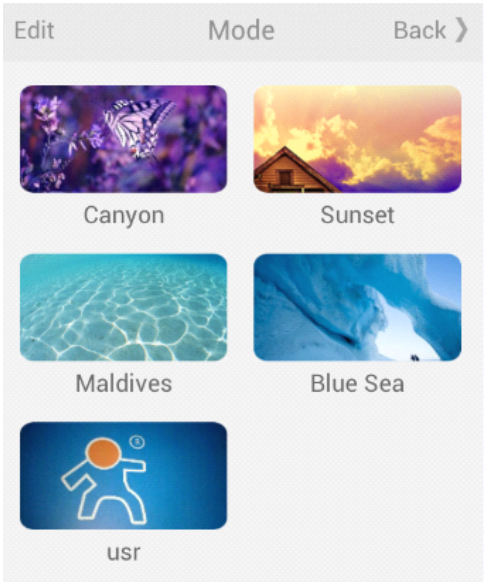

Figure 15 **Customized Scene**

8. Music Smart

WL1 supports “Music Smart” scene, Led color can vary with music which is on in App.
Open the App, click “Scene” icon in the upper left corner, enter the scene management page.
Click “music” to enter the music player page as below.
Click “+” icon, select the music files in the pop list. Then the phone will play music, WL1 colors vary accordingly.

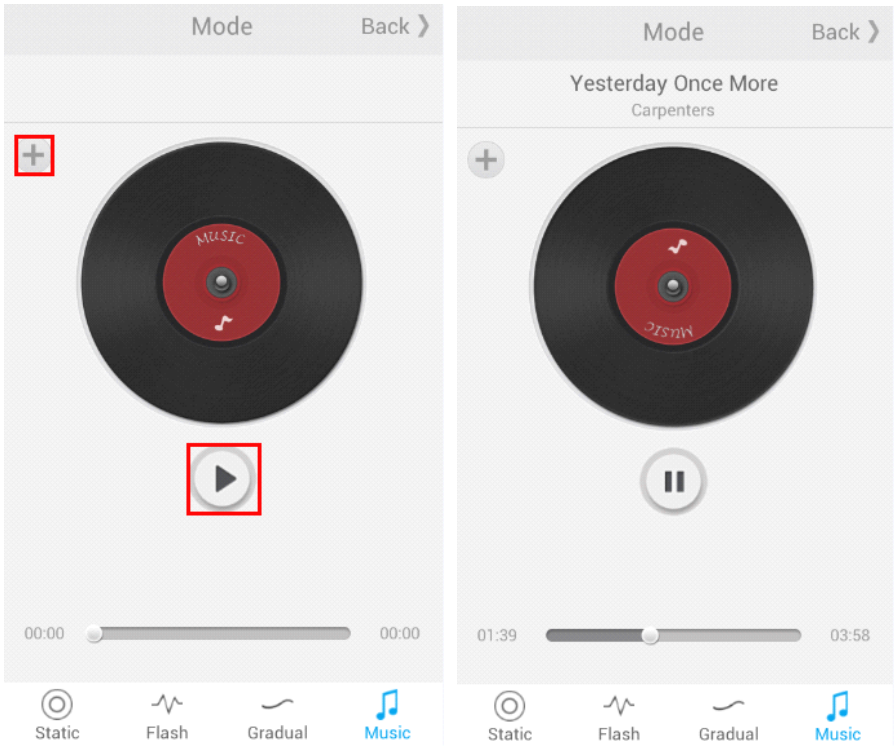

Figure 16 **Music Smart**

9. Electrical Parameters

9.1 Features

※Support 802.11b/g/n wireless standard
※ Simple control,the Android phone and IPhone all can control;
※ WIFI frequency range 2.412GHz-2.484GHz
※ DC 12V/24Vpower supply
※ Size :84.50*44.50*22.50（mm）
※ supply Android App and IOS App
※ Have been tested with Huawei, HTC, Lenovo, SAMSUNG, IPhone, etc.
※ Android each market can download software
※ Three RGB color light, One white light
※ Wide input voltage,DC 5-28V

※ Networking is convenient,Smart-Link function,a key configuration into home network
※ Multi client control, support 5 clients to control at the same time(STA Mode)
※ Working temperature: -40-85 ℃;
※ The LED working mode diversification
※ CE/FCC

9.2 Product Features

Table 1 USR-WL1 Technical Specifications

Class	Item	Parameters
Wireless Parameters	Certification	FCC/CE
	Wireless standard	802.11 b/g/n
	Frequency range	2.412GHz-2.484GHz
	Transmit Power	802.11b: +16 +/-2dBm (@11Mbps)
		802.11g: +14 +/-2dBm (@54Mbps)
		802.11n: +13 +/-2dBm (@HT20, MCS7)
	Receiver Sensitivity	802.11b: -93 dBm (@11Mbps ,CCK)
		802.11g: -85dBm (@54Mbps, OFDM)
		802.11n: -82dBm (@HT20, MCS7)
Hardware Parameters	interface	Power interface
		R, G, B, W, DC12V+
	Operating Voltage	12-24V
	Operating Temp.	-40℃- 85℃
	Storage Temp.	-45℃- 125℃
	Dimensions and Size	84.50*44.50*22.50（mm）
Software Parameters	Network Type	STA/AP
	Security Mechanisms	WEP/WPA-PSK/WPA2-PSK
	Encryption	WEP64/WEP128/TKIP/AES
	Update Firmware	Local Wireless
	Custom development	Support custom Webpage Provide SDK for customers to develop two times (not supplied)
	Join the router	Web/Smart-Link
	App	Android/IOS App

9.3 Interface

WL1 offers a variety of interface, buttons and indicator lights.

9.3.1 Interface

The WL1 provides two kinds of power supply interface:DC5.5*2.1 interfaces and terminals,The other end,WL1 provides R,G,B,W,+ terminal.

9.3.2 Function Keys

Function keys on the top of WL1,specific functions are as follows:

- Short press 1-5 seconds: Smart-Link function, to enter the Smart-Link configuration mode, waiting for the WL1 connected to the router.
- Press 5-10 seconds: WPS function, to enter the WPS configuration mode, waiting for the WL1 connected to the router.
- Long press 10-20 seconds: Reload function, restore factory settings. The parameters are all back to the original default value.

9.3.3 Pilot Light

Pilot lights specific functions are as follows:

- When there is no wifi connection, lamp has been flashing;When the wifi connection is established, light has been on.
- When WL1 into Smart-Link configuration mode.As a configuration mode indicator,when there is no configuration, flash;being the configuration process, slow flash.

9.4 Application Fields

- Slim light box,lighting, signs, advertising signs, etc.;
- In high-end stores,shopping malls and other indoor commercial lighting atmosphere;
- Entertainment,beauty salon lighting,Kara OK and other mood lighting, fashion lighting;
- Atmosphere of the bar, KTV,cafes and other leisure venues lighting;
- Crafts light,car decoration,decorative lighting yacht;
- For the path and profile signs, illuminated signs, etc.;
- Shopping malls, hotels, exhibition halls, outdoor decoration and other places;
- Decorative architectural landscape lighting, home decoration, city lighting;

9.5 Bulk Order/OEM/ODM

This product supports batch customization, including web interface customization, default parameter customization, OEM/ODM

10. Contact

Company: Jinan USR IOT Technology Limited
Address: 1-728, Huizhan Guoji Cheng, Gaoxin Qu, Jinan, Shandong, China
Tel: 86-531-55507297, 86-531-88826739
Web: www.usr.so
Email: sales@usr.cn, order@usr.cn

11. Disclaimer

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12. Update History

2014-07-14 V1.0.0 created
2014-07-14 V1.1.0 Increase the Usr - Link function
2014-08-06 V1.1.1 The user name,password prompt increase.
2015-04-13 V1.1.3 Modify the scope of supply.